CLAIMS

1. Radiotherapy apparatus adapted to provide therapeutic radiation and imaging radiation, further comprising a two-dimensional imager for the imaging radiation, a computing means for preparing tomography data from the output of the imager, the therapeutic source being controllable on the basis of feedback from the tomography data,

wherein the computing means is arranged to prepare a plurality of intersecting sectional views from the output of the imager.

- 2. Radiotherapy apparatus according to claim 1 in which the sectional views are arranged orthogonally.
- 3. Radiotherapy apparatus according to claim 1 in which at least three sectional views are prepared.
- 4. Radiotherapy apparatus according to claim 3 in which the views intersect substantially at the isocentre of the therapeutic source.
- 5. Radiotherapy apparatus according to claim 1 in which each sectional view is an image comprising pixels whose values are derived from a plurality of voxels in the tomography dataset.
- 6. Radiotherapy apparatus according to claim 5 in which the plurality of voxels are disposed transverse to the section in question.
- 7. Radiotherapy apparatus according to claim 6 in which the plurality of voxels are disposed orthogonal to the section in question.
- 8. Radiotherapy apparatus according to claim 6 in which the plurality of voxels are disposed linearly.
- 9. Radiotherapy apparatus according to claim 5 in which between 5 and 20 voxels are employed.

- Radiotherapy apparatus according to claim 5 in which between 7 and 15 voxels are employed.
- 11. Radiotherapy apparatus according to claim 5 in which about 10 voxels are employed.
- 12. Radiotherapy apparatus according to claim 1 in which there is a display means for showing the sectional views.
- 13. Radiotherapy apparatus according to claim 12 in which the therapeutic source is controlled on the basis of instructions from an operator, given via an input means.
- 14. Radiotherapy apparatus according to claim 13 in which the input means is correlated to the display.
- 15. Radiotherapy apparatus according to claim 14 in which the correlation is via a superimposed image on the display which is moveable in response to operation of the input means.
- 16. Radiotherapy apparatus according to claim 15 in which the superimposed image is derived from one of a previous investigation and a treatment of the patient.
- 17. Radiotherapy apparatus according to claim 15 in which the superimposed image is an outline.